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**Firmware source for ST25RU3993-EVAL board**

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Data brief

**Features**

- The ST25RU3993-EVAL board is a Gen2 compliant RAIN<sup>®</sup> reader demonstration board and is composed, among other parts, of an ST25RU3993 (high performance RAIN<sup>®</sup> reader) and an STM32L4 microcontroller
- The ST25RU3993-EVAL board is controlled by the PC software and connected via USB/UART bridge.
- The software supports the following RF protocols and features:
  - ISO 18000-61 in direct mode
  - ISO 18000-62 in direct mode
  - EPC Class 1 Gen2 (ISO 18000-63)
  - Carrier cancellation
  - ST25RU3993 register access
  - Inventory with auto acknowledge
  - RSSI display
  - RSSI mode selection
  - Frequency profile selection
  - Automatic supply voltage control
  - Transmit power control
  - Internal and external PA selection
  - Carrier sense mode
  - Data rate selection
  - Sensitivity control
  - Automatic antenna port switching
  - Anti-collision slot management
  - CW and continuous modulation mode
  - Direct commands
  - RSSI and reflected power sweeps
  - Tag access
  - Generic tag command tool
  - Function assignment to tag Read
  - Saving and recalling configuration

**Description**

STSW-ST25RU003 software comprises of the ST25RU3993 firmware source, which is a USB/UART bridge over USB controlled application for STM32L476.

It allows the GUI on the PC to control the ST25RU3993 on the ST25RU3993-EVAL board and exchange arbitrary RF frames. The provided project is ready to be compiled using the Keil<sup>®</sup> toolchain.

# 1 Revision history

**Table 1. Document revision history**

| <b>Date</b> | <b>Revision</b> | <b>Changes</b>                                                                 |
|-------------|-----------------|--------------------------------------------------------------------------------|
| 24-Aug-2017 | 1               | Initial release.                                                               |
| 02-Oct-2017 | 2               | Changed all occurrences of "ST25RU3993-DISCO board" by "ST25RU3993-EVAL board" |

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